

# Semi-Automated Self-Serving Healthcare System

Computer Engineering Department, Umm Al-Qura University, Makkah, Saudi Arabia  
Spring 2022



Through our personal experiences, we have noticed that most health authorities to this day still use the system based on human energy to manage hospitals. Although the system is old, but it still satisfies the purpose, but with the new vision of the Kingdom 2030, it has become necessary to keep pace with the requirements of the times to manage hospitals using the latest technologies, dispense with human staff as much as possible, and direct their abilities to positions of greater benefit.

## Introduction

From our personal experience we know most of the time it's not a seamless experience that starts from entering the hospital and waiting for your turn to pay bill and to see a doctor. But the worst part is, people started getting used to it and say: "Well, it's always been like this, right?". Yes, but it doesn't have to be.

## Objective

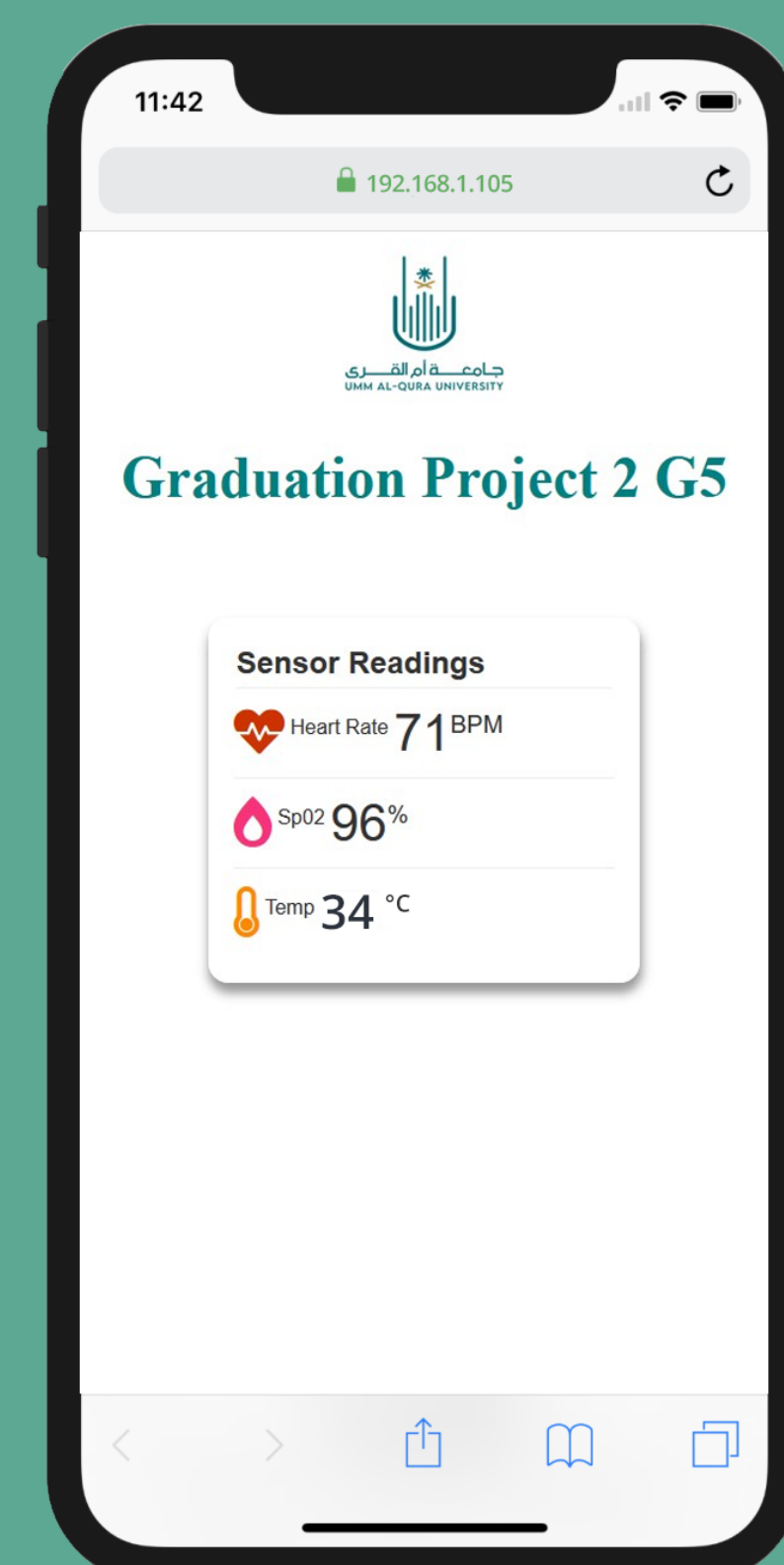
- Reduce paperwork.
- Data set to make better plans.
- Take advantage of 5G.
- depend on technology & smart systems.
- using IoT & automated systems to enhance the performance.
- better systems means happy visitors.

## Methodology

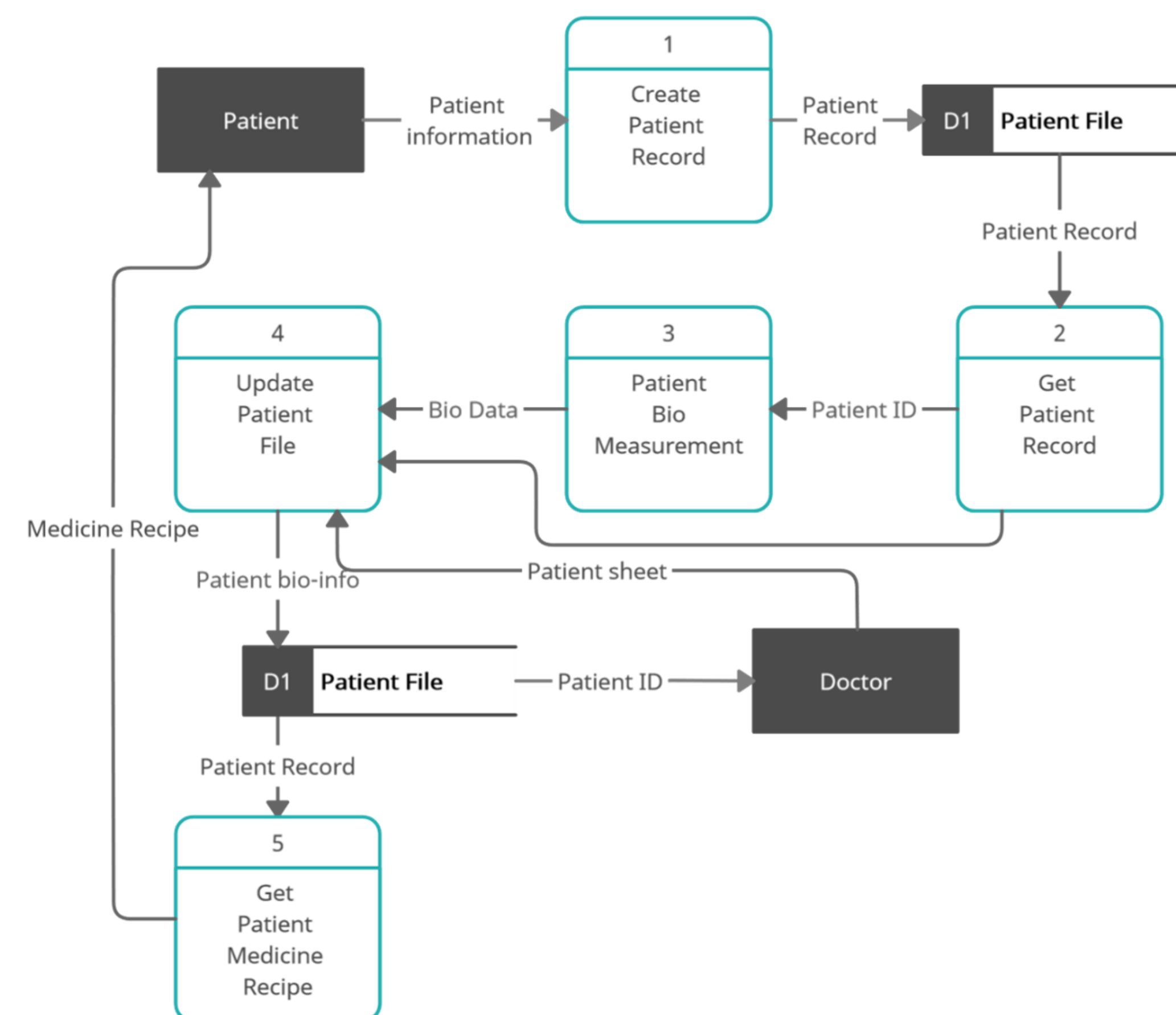
- Collecting data - about existing systems.
- Requirements - analyze and documents what the project needs.
- Design - draw the SW/HW architecture & create diagrams.
- Implementation - writing code & troubleshooting SW/HW problems.
- Verification - test is everthing in the SW & HW side is works how it's designed to.
- improvement - how to make the system more reliable and user friendly.

## Results/Findings

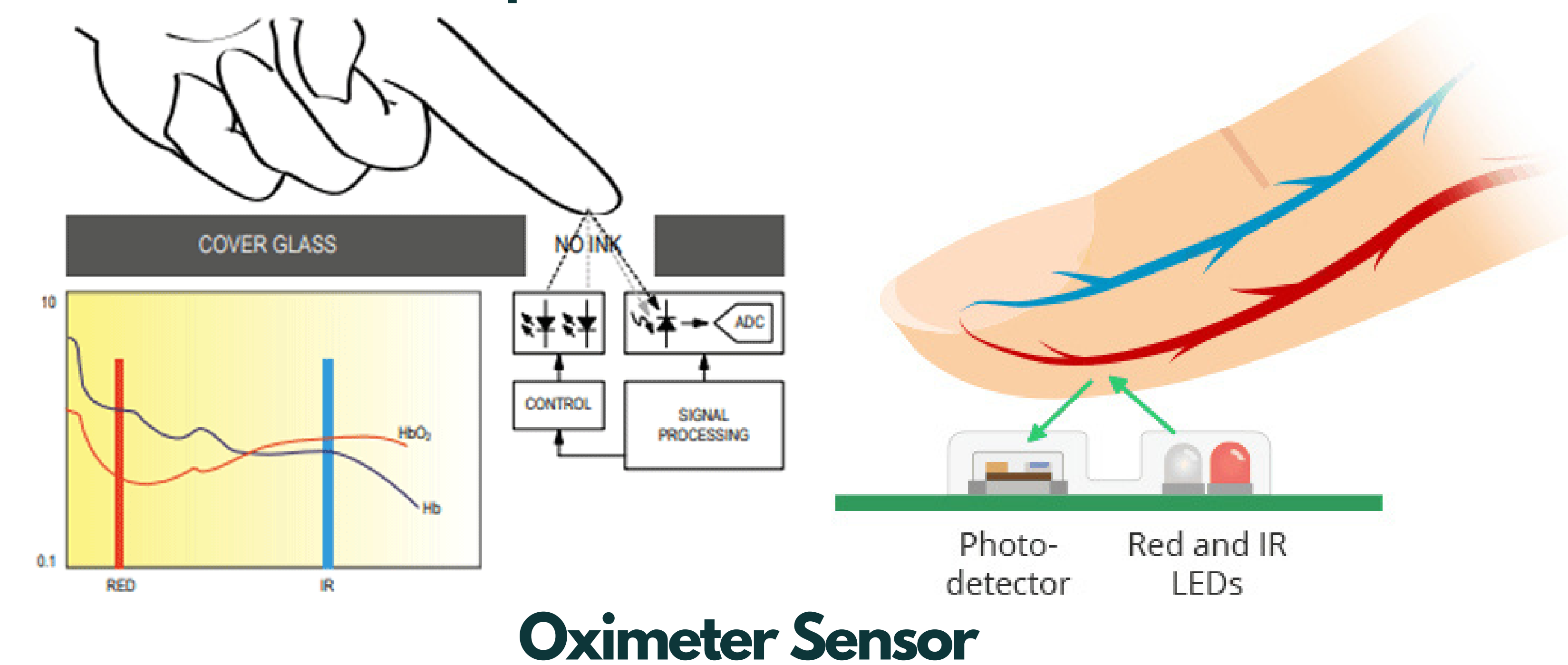
- Web page to show real-time bio-metrics.
- Dashboard to show data charts & statistics.



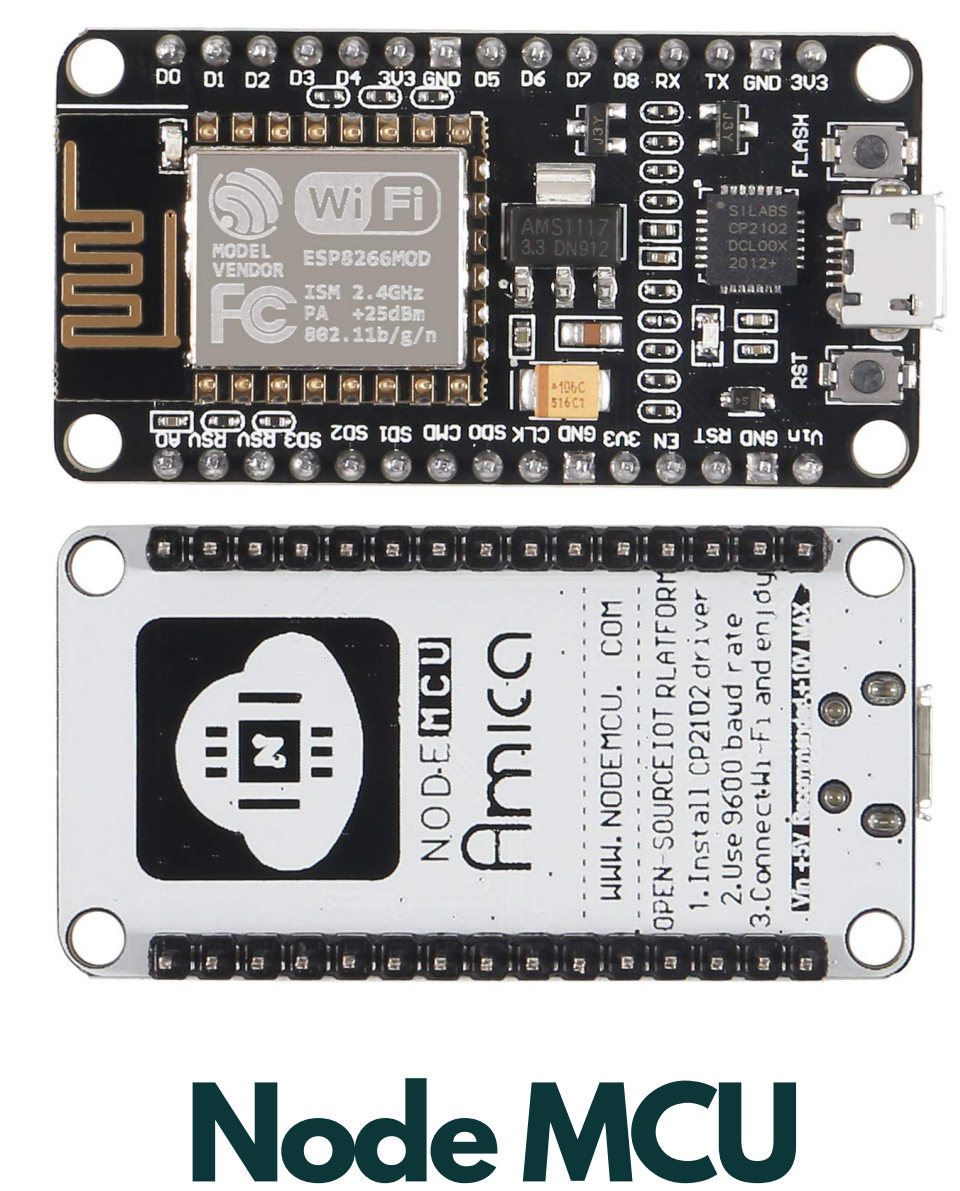
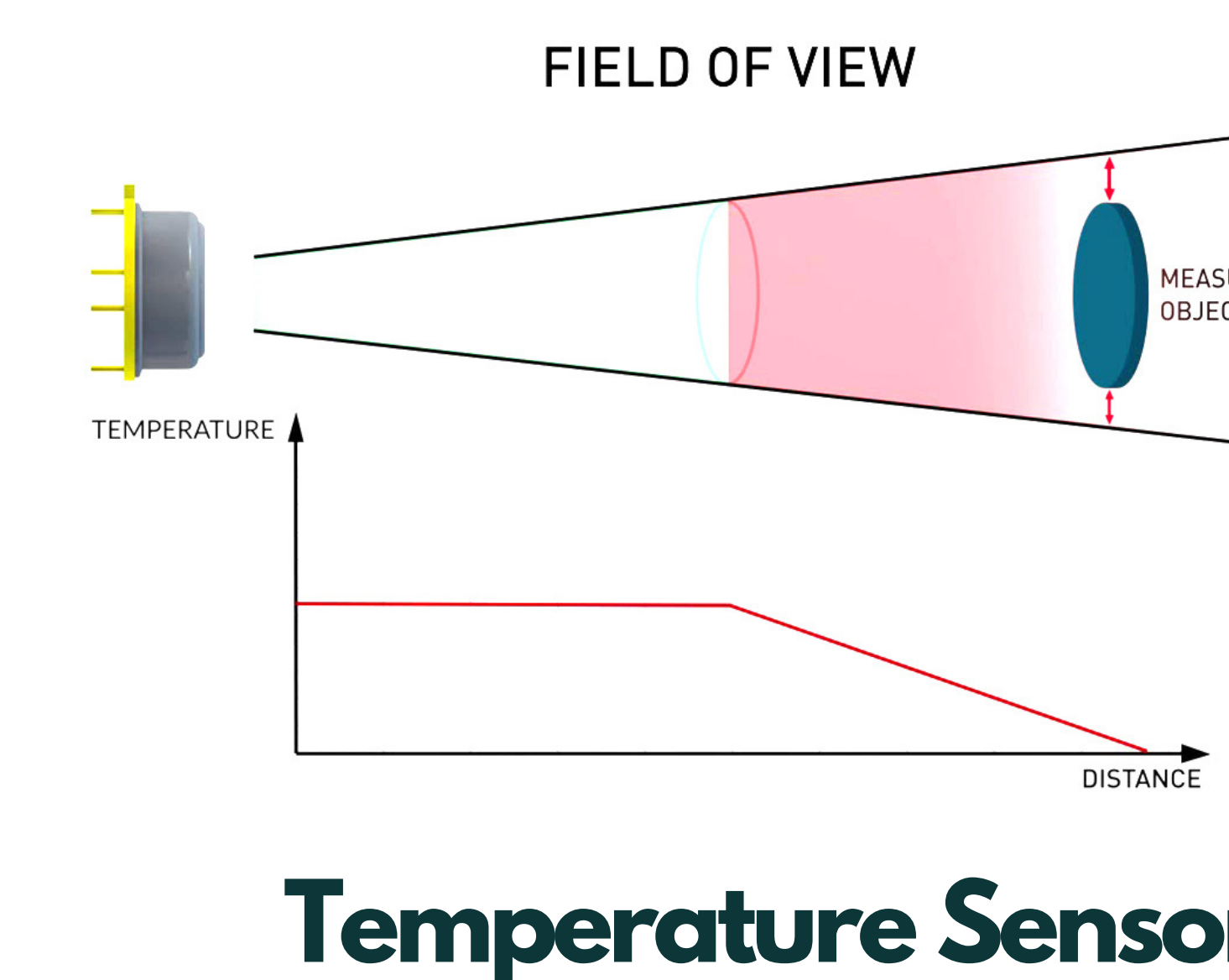
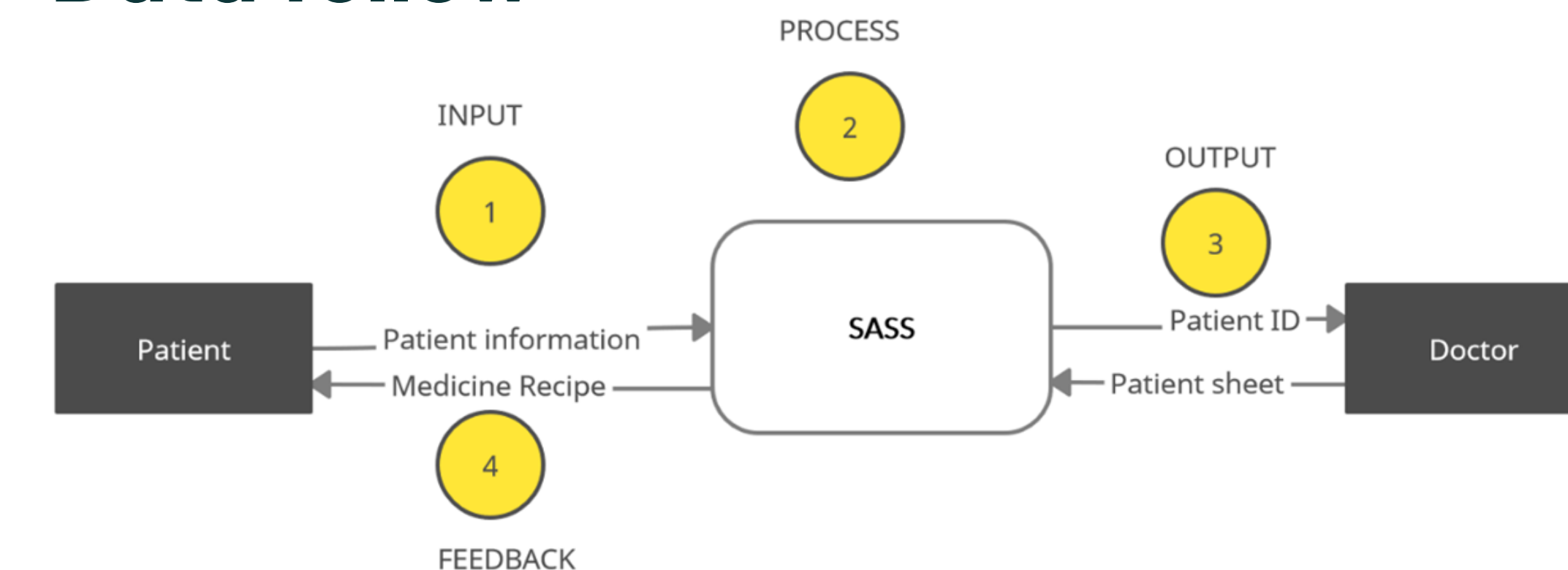
## System Design



## Hardware Components



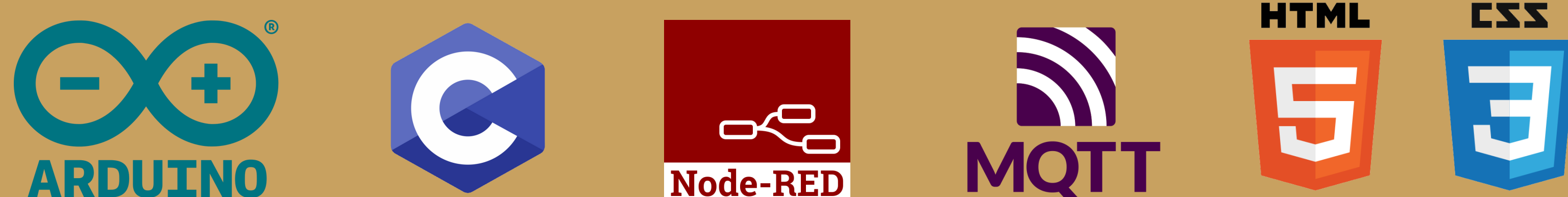
## Data follow



## Conclusion

SASS is the next level in health care management systems since, this project cost less than human based systems, collect visitors data, make statistics and easy to add it to the system.

## Tools used



**Authors** | Yazeed Majid Al-Ahmadi | yazedalahmadi@gmail.com  
Zyad Abdullelah Al-Amri | zyadalamri3@gmail.com  
Ahmad Yousef Omr Bawhab | bawhab123@gmail.com  
Mohammad Abu Yousuf Abdul Bari | h.s\_33@hotmail.com

**Supervisor** | Dr. Saleh Mohammed Basalamah | smbasalamah@uqu.edu.sa